

August 24, 1998

Mr. Samuel L. Wehn
Director
Enron Capital and Trade Resources Corporation
101 California Street, Suite 1950
San Francisco, CA 94111

Dear Mr. Wehn:

PITTSBURG DISTRICT ENERGY FACILITY DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess project alternatives and potential mitigation measures.

Data requests are being submitted in the areas of: air quality, biological resources, industrial worker safety and fire protection, land use, noise, soils and water resources, transmission line safety and nuisance, visual resources, and waste management. Written responses to the enclosed data requests are due to the Energy Commission staff on or before September 24, 1998, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time to provide the information or object to providing it, you must, within 15 days of receipt of this notice, send a written notice to both Vice Chair David Rohy, Presiding Member of the Committee for the Pittsburg District Energy Facility proceeding, and me. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (e)).

A publicly noticed workshop is scheduled for September 4, 1998, in the City of Pittsburgh, to discuss and clarify these data requests. Staff will be available to answer questions regarding the data requests and the level of detail required to answer the requests satisfactorily.

If you have any questions regarding the enclosed data requests, please call me at (916) 654-4082.

Sincerely,

Eileen Allen
Energy Facility Siting Project Manager

Enclosure

cc: Proof of Service (98-AFC-1)
Ray Menebroker, ARB
Randy Jerome, City of Pittsburgh
Dennis Jang, BAAQMD
Paul Causey, Delta Diablo
Matt Haber, U.S. EPA, Reg. IX

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(98-AFC-1)**

Technical Area: Air Quality

Author: Guido Franco

ISSUE: The Application for Certification (AFC) indicates on page 1-3 that the combustion turbine generators (CTG) may include an inlet air cooling system to enhance the performance of the CTG. If the applicant selects a water evaporative system, there is a potential for a small increase in particulate matter emissions from any solids in solution in the water.

1. Please indicate if there is a possibility for an increase of particulate matter emissions when using the inlet air cooling system or if the evaporative cooling water would be practically free of dissolved solids. For the former case, please also include an estimation and document the likely increase of particulate matter emissions.

ISSUE: The AFC indicates on page 1-4 that the CTG will operate at 2.5 parts per million by volume (ppmv) at 15 percent oxygen, but the AFC also indicates that the applicant is unsure as to whether the project can reliably meet this control level. This is a very low concentration and we are not aware of any other plant of this size operating on a routine basis at this level of control. In practice, this means that the proposed power plant would have to operate below this level to avoid any possibility of violation of permit conditions. Careful design of the nitrogen oxides (NO_x) control system becomes extremely important to make sure that the applicant has a fair chance of achieving such a high level of control in order to avoid future compliance problems.

2. Please provide documentation from Selective Catalytic Reduction (SCR) or any other proposed control systems vendors that this level of control would be achievable on a routine basis. Please also indicate the critical design considerations that may be necessary. For example, would it be necessary for the vendor/manufacture to use computational fluid dynamics simulations or scale-down physical models to ensure good mixing of NO_x and ammonia in the SCR?

ISSUE: On page 1-6 the AFC indicates that "start-up of the facility is expected to occur in months 18 through 20" after the "Notice to Proceed." Our understanding is that "start-up" includes the operation of the facility occurring before the start of commercial operation. During this period of testing, calibration, steam purging, and operation without air pollution control systems, high emissions levels are expected. Even though these emissions would be temporary, California Energy Commission (Commission) staff needs to analyze their potential air quality impacts. A similar

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situation occurs during "Firm Capacity Tests" which are designed to determine the maximum potential capacity of a power plant.

3. Please provide information on the expected levels and duration of emissions of NO_x, CO, VOC, SO₂, and PM10 that would occur during "start-up" (as defined above) and during any Firm Capacity Tests that may be envisioned for this project.

ISSUE: Page 3.1-1 of the AFC indicates that the Delta Diablo Wastewater Treatment Facility (DDWTF) would be expanded to approximately three and one-half million gallons per day to support the project. This action may result in an increase of air pollution levels both during construction and during normal operation of the wastewater treatment facility.

4.
 - a. Please provide information on the timing, duration, and expected emission levels during the construction activities related to the expansion of DDWTF.
 - b. Please also discuss its associated air quality impact including any concurrent activities that may happen with the construction of the Pittsburg cogeneration power plant.
 - c. In addition, please provide information on the expected emission levels, including ammonia, from the normal operation of the DDWTF due to this expansion.

Construction impact analyses can be extrapolated from past construction impact analyses and can be enhanced to include actual monitoring data obtained by the California Air Resources Board to better estimate emissions from construction activities ("Improving PM10 Fugitive Dust Emission Inventories," Patrick Gaffney and Dale Shimp, Air Resources Board Proceedings of a Specialty Conference, "Emission Inventory: Planning for the Future," October 28-30, 1997, Air and Waste Management Association).

ISSUE: Table 3.4.5-1 indicates that the cooling tower drifting loss is 0.0005% based on use of cellular type drift eliminator. This is an adequate level of control, however, potential particulate matter impacts are a function of the size distribution of the droplet (drift) and the ambient conditions. Commission staff needs this information to better assess impact levels from the cooling towers.

6. Please provide information from high efficiency drift eliminators vendors/manufacturers on the expected size distribution of the droplets escaping (drift) from the cooling towers. Please note that actual test data from

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high efficiency mist eliminators seems to indicate that the mean size droplet is about 200 microns (Characterization of Drift Rates and Drift Droplet Distribution for Mechanical Draft Cooling Towers. Cooling Tower Institute Paper No: TP97-04. 1997).

ISSUE: The AFC on page 5.2-22 indicates that the auxiliary boiler would operate at 9 ppmv at 15% oxygen using a low NO_x combustion engineering design. It is unclear if a BACT analysis is also required for the auxiliary boiler.

7. NO_x concentrations for boilers are usually expressed at 3% oxygen. The concentration indicated in the application is equivalent to 27 ppmvd at 3% oxygen. Please clarify if the 15% oxygen in the application is correct.
8. Please indicate if the auxiliary boiler needs to be controlled at the BACT level to comply with Bay Area Air Quality Management Districts (BAAQMD) Regulations. If this is the case, please provide a BACT analysis for the auxiliary boilers.

ISSUE: On page 5.2-23 the AFC indicates that the highest particulate matter emissions are produced from the gas turbine manufactured by Westinghouse. This does not seem to be in agreement with the data provided in Appendix I.D which indicates that the ABB gas turbine would have higher hourly PM emission levels. In addition, the applicant is assuming lower levels of PM emissions than what was provided by Westinghouse "based on past experience with combustion turbine vendor particulate matter emissions estimates and past turbine emissions testing."

9. Please provide information on the actual PM, and if possible, NO_x, CO, and Precursor Organic Compounds (POC) source test data from power plants using gas turbines similar to the ones proposed for this project. For the PM data indicate what method of measurement was used (e.g. EPA Method 5) and if PM in the back half train was included in the data. If data on both front and back trains are available, please also include this information.

ISSUE: It is important to understand that Conditions of Certifications must reflect the maximum hourly, daily, and annual emission levels used in the air dispersion modeling and offset analyses. For pollutants without continuous emission monitors (CEMs) emission levels are controlled using emission factors developed during source tests and actual fuel consumption. In addition, the applicant appears to be proposing two different levels of annual emissions as shown on page 5.2-55. For these reasons, Commission staff needs data for both emissions and heat input rates.

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10. Please provide in writing a summary of the maximum hourly, daily, and annual emissions for all pollutants (NO_x , CO, VOC, PM10 and SO_2) and the maximum heat input rates (e.g. MMBTU per day) for both the auxiliary boiler and the CTG.

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Technical Area: Biological Resources

Author: Marc Sazaki

ISSUE: Areas near the proposed power plant project should be described in terms of the biological resources that exist or the nature of the habitat these available areas provide wildlife species. Also, any benefit these areas potentially provide to transient wildlife species should be generally described along with a discussion of the potential impacts the proposed project could have on these areas.

Figure 3.1-10 is an oblique aerial color photograph of the project area that shows a superimposed image of the proposed power plant. Very near the southwest corner of the proposed power plant is a large area of what appears to be standing water. The construction lay down area will be east of this inundated area, if not partially overlapping it. It is likely that the maximum size of the inundated area varies from year to year depending on the level of precipitation and that the size of the inundated area declines over the summer. This inundated area could provide valuable habitat for wildlife, including aquatic invertebrates such as fairy shrimp. There is no discussion of this inundated area in the biological resources section of the AFC. It should be identified and described because of its proximity to the proposed power plant project.

1. Please provide a discussion of the inundated area shown on Figure 3.1-10 that apparently exists on or very near a portion of the vacant land on which the proposed power plant project will be constructed. Include a description of the inundated area as to its wetland character, i.e. fresh, brackish or saline, the wildlife that utilize or inhabit the inundated area including any endangered or threatened invertebrates such as fairy shrimp. Discuss potential project related impacts and what mitigation measures are proposed to minimize the impacts identified.

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Technical Area: Industrial Worker Safety and Fire Protection

Author: Ellen Townsend-Smith

ISSUE: Commission staff must evaluate whether or not the proposed project complies with applicable laws, ordinances and standards; and whether or not the project represents an acceptable risk for occupational safety and fire protection. After reviewing sections 3.0, 5.10.1.7, and 5.17 of the AFC, staff has determined that additional information is required to complete an analysis of the worker safety program. The information requested is required to allow staff to independently evaluate the potential for worker and fire safety impacts associated with the proposed project.

1. Please describe how emergency response teams will gain access to the power plant site in the event emergencies and/or fires occur during construction and operation of the project.

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Technical Area: Land Use

Author: Amanda Stennick

ISSUE: Section 7.4.12 of LORS Table 7.0-1 (page 7.0-17) states that in order to comply with policies for public lands administered by the Bureau of Land Management, the PDEF will have to obtain right-of-way permits from the US Army Corps of Engineers. Land Use Section 5.9.1.1.2 (page 5.9-6) states that there are no federal or state lands within the project study area. These two sections appear to be in conflict with each other.

1. Please clarify whether state or federal lands are within the project study area, including those lands utilized for linear facilities. If state and federal lands are within the project study area, please indicate their jurisdictional boundaries on a map, and provide a schedule of permits required from each agency.

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Technical Area: Noise

Author: Steve Baker

ISSUE: The applicant calculates in the AFC that the project can produce noise, at the nearest residential receptor, at a level of 65 dBA L_{dn} without violating applicable LORS. This conclusion is based in part, however, on ambient noise levels at the nearest residence expressed in terms of 24-hour averages. Due to the heavily industrial nature of this neighborhood, it is likely that nighttime background noise levels are significantly lower than might be expected based on these 24-hour average figures. In order to more reliably determine the maximum permissible contribution of the project to noise levels, staff needs additional information.

1. Please provide ambient noise monitoring results at Noise Monitoring Location 10 (the nearest residence) in terms of short-term (hourly or shorter interval) measurements. Include nighttime L_{eq} and L_{90} figures as a minimum.

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Technical Area: Soils and Water Resources

Author: Joe O'Hagan

ISSUE: Construction and operation of the PDEF Project may induce water and wind erosion at the power plant site and along the associated linear facilities.

1. Provide a draft erosion control, revegetation and stormwater management plan that identifies measures that will be implemented at the power plant and associated facilities. The Commission staff needs to see a draft erosion control plan that identifies all permanent and temporary measures in written form and depicted on a construction drawing(s) of appropriate scale. The elements of the plan shall include temporary and permanent measures including stormwater runoff control and revegetation efforts. Any measures necessary to address Nation Wide Permits, Section 404 Permits or Streambed Alteration Agreements should be identified. Revegetation efforts should address both erosion control and habitat restoration. Revegetation information in the plan should specify the type of seed and fertilizer, seeding and fertilizer rate, application method, the type and size of any container plants to be used and the criteria for judging revegetation success. The plan should also identify maintenance and monitoring efforts for all erosion, stormwater runoff control and revegetation measures including measures to rectify unsuccessful revegetation efforts.

ISSUE: Table 3.4.5-1 shows summer maximum and average annual water usage rates with wastewater treatment. Figures B-1 and B-2 show water balances for both discharge to the wastewater treatment facility and on-site treatment, respectively.

2. Please provide a revised Table 3.4.5-1 showing average and maximum water usage for both wastewater treatment options.
3. Identify the likely number of days the PDEF will operate under summer maximum conditions.

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Technical Area: Transmission Line Safety and Nuisance

Author: Obed Odoemelum

ISSUE: To verify the adequacy of the field-reducing measures proposed for the line, staff requires data on the strengths of the line-related electric and magnetic fields.

1. Please provide the strengths of the existing electric and magnetic fields within the line impact area as well as the modeled estimates of the electric and magnetic fields to be encountered during operations. Such field strength should reflect the contributions from the proposed as well as nearby lines. Information on the varying widths of the line right-of-way (as noted on page 4.2-4) should be included for contextual presentation of the potential for any long-term residential magnetic field exposures along the line route.
2. Details of the applicable design guidelines (resulting from PG&E's power flow analysis as noted on page 4.2-7) should be provided to show compliance with current CPUC requirements.

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Technical Area: Visual Resources

Author: Gary Walker

ISSUE: Staff needs to know the location, size, and type of nearby existing transmission lines and structures in order to accurately assess the existing visual conditions in the area of the proposed project. Staff also needs to know the type of proposed structures that would be built to evaluate their effect on those conditions.

The AFC (p.3.5-4) states that "the Project-Utility line will likely utilize lattice steel structures in those areas where it parallels existing lines utilizing such structures and steel poles elsewhere along the proposed route." However, in Figure 3.1-9B the existing structures parallel to the north-south section of the proposed route appear to be poles while the proposed structures are shown as lattice towers.

1. Please explain the apparent discrepancy between the statement on p.3.5-4 and the proposed structures shown in Figure 3.1-9B.
2. Please provide a map showing:
 - a. the proposed electrical transmission line routes;
 - b. the types of structures (lattice or pole) proposed for each segment of the proposed electrical transmission line routes;
 - c. the existing transmission lines within one-quarter mile of the proposed transmission line routes;
 - d. which existing lines are 230 kV, 113 kV, or 60 kV;
 - e. the type of structures (lattice or pole) and material (wood or steel) for each existing line.
3. Please specify the height of the transmission structures for each of the existing transmission lines within one-quarter mile of the proposed transmission line routes.
4. AFC Figure 3.1-9B shows four of the proposed electrical transmission towers. However, the figure does not show a tower on the south side of the railroad tracks. In contrast, Map 3.2-1 shows the proposed electrical line route as crossing the railroad tracks before turning east. Please explain this apparent discrepancy.

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ISSUE: The AFC contains visual simulations of the power plant and transmission line. Staff needs to determine the accuracy of the visual simulations.

5. Please provide a discussion demonstrating that the simulated size of the facilities is accurate. Include a description of the simulation technology used and the means for verifying the accuracy of the simulation.

6. The AFC (p.5.13-17) states that

"Regarding views toward the power plant from points along East Santa Fe Avenue, Figure 5.13-11b demonstrates that the sound wall for the proposed Truck Bypass Road would block the plant facilities from view relative to ground floor views and those from the street. Some homes are two-story; it is assumed that part of the stacks would be seen over the wall from the upper floor of these homes."

Please provide a line-of-sight diagram to scale showing:

- a. a ground floor viewing point from a representative home near Viewing Point 4,
- b. a second floor viewing point from the home,
- c. the proposed sound wall,
- d. the proposed power plant,
- e. a line of site from the ground floor viewing point intersecting the top of the sound wall and extending to the power plant, and
- f. a line of site from the second floor viewing point intersecting the top of the sound wall and extending to the power plant.

ISSUE: The AFC includes a photograph looking north at the proposed site (Figure 3.1-9A) and a photosimulation of the power plant, the 115 kV transmission line, and the Truck Bypass Road, and the sound wall (Figure 3.1-9B). In the photosimulation the proposed transmission towers appear to be approximately the same height as the proposed HRSG exhaust stacks. However, in the text the transmission towers are listed as 130 feet in height while the HRSG stacks are listed as 175 feet in height.

7. Please explain this apparent discrepancy. Specify whether the HRSG stacks would actually appear taller than they appear in the photosimulation or if the

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transmission towers would actually appear shorter than they appear in the photosimulation.

ISSUE: The AFC (p.3.6-2) states that "a new 16-inch diameter above ground steam line will be constructed to provide USS-POSCO Industries with steam for on-going plant operations." Table 3.6-1 of the AFC describes the pipeline as 3,200 feet long. Table 3.6-2 of the AFC describes the proposed steam line as "Aboveground (Existing Piperack)." Staff needs to know the height of the proposed above-ground steam line to assess its visual impact.

8. Please specify the steam line's height above the ground.
9. Please specify what portion of the 3,200 foot long line would use an existing piperack. For any portion of the line that would require a new piperack, please describe its size and appearance.

ISSUE: The AFC (p.5.13-18) states in regard to the proposed sound wall for the proposed Truck Bypass Road that "although not shown, in addition to grass, some shrubs will be planted as well." The sound wall has the potential to become an opportunity for graffiti. Staff needs to know the extent of proposed mitigation for potential visual impacts due to the proposed project.

10. Please specify whether the applicant will commit to providing a virtually continuous screen of shrubbery along the entire length of the proposed sound wall to minimize the potential for graffiti.

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Technical Area: Waste Management

Author: Mike Ringer

ISSUE: Commission staff must determine the types of hazardous wastes which may be generated during operation of the proposed project and assess the adequacy of proposed waste management methods.

1. Please indicate how cleaning of the heat recovery steam generators and auxiliary boiler will be done prior to as well as during facility operation. Describe the frequency of cleaning, types and amounts of waste expected to be generated, and how the waste is to be managed or disposed of.
2. Please describe waste management methods for the following: 1) onsite soils containing arsenic in levels exceeding health based levels, and 2) railroad ties found onsite which may be treated with creosote or other wood preservative.

ISSUE: Proper management of all hazardous and nonhazardous wastes must be planned for in the event of facility closure, whether unplanned or at the end of the useful life of the project.

3. AFC pages 3.8-2 and 3.10-1 refer to a contingency (decommissioning) plan which would describe measures which would be taken in the event of a shutdown, including removal of hazardous wastes. When will such a plan be submitted to the staff for review and what measures are anticipated to be taken to ensure the safe removal of all onsite wastes?